Board Approved Site Assessment (BASA) Policy

1.0 INTRODUCTION

1.1 Applicability

The guidance contained in this policy is applicable to an owner of a Dispensing Facility with an UST System that is submitting an Application for Certificate of Compliance to the UST Board.

Definitions found in 503 CMR 2.02 have the same meaning when used in this policy. In addition, the term Operated means the Dispensing Facility dispensed Petroleum Products as described and defined in
503 CMR 2.02.

"Contaminant Levels" as used in the definition of Board Acceptable Site Assessment (BASA) shall have the same meaning as Petroleum Product as defined in 503 CMR 2.02.

1.2 Approach

The purpose of this policy is to provide guidance to:

- Reasonably assess whether levels of Petroleum Products are present at a Dispensing Facility due to a release of Petroleum Product which require notification to the Massachusetts Department of Environmental Protection (MassDEP)

- Identify site investigatory requirements based upon historical usage of Petroleum Products and evidence of Petroleum Products release(s)from the UST system

The BASA is intended to provide information obtained from limited investigative and assessment actions of sufficient scope and level of effort to make and/or guide determinations to assess for the presence or absence of Petroleum Products including the area of the former, existing, and/or proposed UST System. The outcome of this investigation will arrive at one of two possible conclusions:

1. Based upon records review, interviews, site reconnaissance, and site sampling activities, there are no levels of Petroleum Products, oil and/or hazardous materials or conditions at the Dispensing Facility related to a release of Petroleum Product which require notification to MassDEP and which require one or more Response Actions; or

2. Based upon the records review, interviews, site reconnaissance, and site sampling activities, there are levels of Petroleum Products, oil and/or hazardous materials or conditions at the Dispensing Facility related to a release of Petroleum Product which require notification to MassDEP and which require one or more Response Actions.

Additional guidance for conducting site assessments at Dispensing Facilities where a release has occurred is provided in the various references listed in Appendix 3 of the 21J regulations. Soil and groundwater sample collection and analysis should meet the requirements of 310 CMR 40.0017.

1.3 Timing of Board Acceptable Site Assessment

Generally, all Applications for Certificate of Compliance must be preceded by a BASA. The following are scenarios under which an Owner may be required to submit a BASA:

A. The Owner has never submitted an Application for Certificate of Compliance,

B. An issued Certificate of Compliance was Revoked for Failure to Renew, Terminated, or determined to be Ineligible to Renew due to the removal of the USTs. In these cases, the Owner must resubmit an Application for a Certificate of Compliance preceded by a BASA.

C. Resubmitting an Application for Certificate of Compliance where a prior BASA was rejected due to failing the BASA requirements, but the Dispensing facility has since achieved a Permanent Solution status or has since completed a BASA demonstrating that there are no levels of Petroleum Products, related to the release of Petroleum Products at the Dispensing Facility which require notification to MassDEP.

When submitting an Application for Certificate of Compliance for a Dispensing Facility for which a Permanent Solution Statement or Downgradient Property Status was submitted to MassDEP a copy of the link to the Permanent Solution Statement or Downgradient Property Status shall be submitted to the Board within 90 days of submission of the Permanent Solution Statement or Downgradient Property Status to the MassDEP.

Prior to submitting an Application for Certificate of Compliance, one copy of the BASA documenting that there are no levels of Petroleum Products related to the release of Petroleum Products at the Dispensing Facility must be completed and submitted via email to the Board no more than 90 days after the date that the soil and groundwater samples were collected

2.0 SITE ASSESSMENT PROTOCOLS

2.1 Introduction

This section provides specific guidance pertaining to site assessment practices that should be utilized in conducting the BASA.

The BASA shall include the following:

1. Obtaining or evaluating records that provide information about environmental conditions at the Dispensing Facility. Analyze and interpret information in the records for the potential presence of Petroleum Products and related constituents (e.g. MTBE)

2. Evaluation of the existing or former UST System(s) to evaluate the potential of the UST System as a source of petroleum contamination to environmental media (e.g. evaluate inspection and maintenance records);

3. Site reconnaissance and sampling to observe and measure environmental conditions at the Dispensing Facility.

4. Interviews with current and prior facility owners to obtain information about the site which has not necessarily been documented in records for the Dispensing Facility to guide the site reconnaissance and soil and groundwater sampling efforts; and,

5. Report preparation to summarize the findings of the site assessment.

2.2 Records Review

The purpose of the records review is to obtain and evaluate existing documentation to assess existing environmental conditions at the Dispensing Facility. The environmental professional performing the records review must make a reasonable effort to obtain all documentation which is pertinent to assessing the environmental conditions at the Dispensing Facility including: (1) information which is publicly available, and (2) information available from the current and/or past owner/operator of the Dispensing Facility.

2.2.1 Publicly Available Information

The publicly available sources that should be reviewed and summarized in the BASA Report are shown on Table 1. In addition, local records, which are reasonably obtainable, should also be evaluated in order to obtain additional information which is pertinent to assessing environmental conditions at the Dispensing Facility.

In addition to the sources shown in Table 1, the BASA should provide a discussion of the physical setting of the Dispensing Facility. A current USGS 7.5 Minute Topographic Map showing the area on which the Dispensing Facility is located, and a Massachusetts GIS, MassDEP MCP (21E) Numerical Ranking System (NRS) Site Map of the site or similar image depiction should be provided in the BASA Report.

Historical records pertaining to the Dispensing Facility should be reviewed as these records may contain pertinent data about the use and/or disposal of oil and/or hazardous materials (OHM) at the Dispensing Facility. Historical records may also contain important information about the history of the previous uses or occupancies of the Dispensing Facility. The types of historical information which should be included as part of the BASA are shown in Table 2.

Historical information may be obtained from the sources shown in Table 1 including, but not limited to:

1) aerial photographs,
2) fire insurance maps
3) property tax files,
4) recorded land title records,
5) USGS maps,
6) local street directories and maps,
7) records maintained by the local building department, and
8) zoning/land use records.

In addition, previous environmental site assessment reports, if available, can be relied upon to provide historical information about the Dispensing Facility if such information is considered reasonably complete and accurate. Notwithstanding, historical usage of the Dispensing Facility subsequent to any previous site investigation report must still be obtained and included in the BASA Report.

2.2.2 Information Obtained from Files Maintained by the Current and/or Past Owner/Operator

Pertinent information about the Dispensing Facility and its operation concerning environmental conditions that may not be available in public records should also be obtained from files maintained by the current and/or past owners and operators of the Dispensing Facility. This information may be obtained from the Dispensing Facility files and by conducting interviews with current and/or past owner/operators (see section 2.40).

Pertinent information in the Dispensing Facility files pertaining to environmental conditions may include but is not limited to:

1) plans depicting locations of buildings, underground utilities, USTs, septic fields, oil/water separator(s),
2) permits, licenses, registrations,
3) inspection reports,
4) internal audit reports, and
5) incident reports.

2.3 Site Reconnaissance and Sampling

The extent of site reconnaissance and sampling activities should be conducted commensurate with the findings of the records review (section 2.20) and evaluation of existing UST System(s) that are the subject of the Application for Certificate of Compliance.

2.3.1 Site Reconnaissance

The objective of the site reconnaissance is to take actual observations of site features and activities which are pertinent to assessing the environmental conditions of the Dispensing Facility. The environmental professional preparing the BASA is required to visit the Dispensing Facility at least one (1) time to visually and physically observe the property and any structure(s) located on the property to the extent practicable. Reconnaissance of both the exterior of the Dispensing Facility as well as the interior of structures located on the Dispensing Facility should be conducted and documented in field notes which are to be appended to the BASA Report. The components shown in Table 3 should be included as part of the site reconnaissance.

The site reconnaissance field notes should include a sketch of the Dispensing Facility and adjacent properties as described in Table 4.

Field notes taken during the site reconnaissance must be signed and dated by the environmental professional conducting the reconnaissance.

2.3.2 Site Sampling

Site sampling activities are required for all BASAs to confirm the presence or absence of concentrations of Petroleum Products which require notification to MassDEP and which require a Response Action.

2.3.3 Soil and Groundwater Sample Collection and Analyses

Collection of soil and groundwater samples is required as part of the site investigation activities being conducted during a BASA. Soil and groundwater sample collection should be performed at appropriate locations and using applicable methodology selected by a qualified environmental professional. Either temporary or permanent monitoring points may be employed. Appendix 3 of the 21J Regulations provides a list of references that contain guidance for the collection and analytical methods for soil and groundwater samples.

A minimum of one upgradient (to the UST system) and two downgradient permanent or temporary groundwater sampling points must be installed on the property. The actual number of wells needed, and their locations will be based upon records review, site reconnaissance, UST evaluation or interviews, if available, which indicate the potential for contamination at the Dispensing Facility, or property. In addition, one monitoring well shall be located in the approximate center of the area where former USTs were located, if feasible. The direction of groundwater flow can be initially

evaluated based on existing site and/or regional data or inferred from local topography and hydrology to locate temporary or permanent monitoring points.

Existing tank field monitoring wells may also be used to satisfy groundwater monitoring requirements in the vicinity of an UST system, provided they are properly installed (see “Standard Reference for Monitoring Wells"; MassDEP
Publication #WSC-310-91 and any updates) and are screened above and below the water table. In such case, a minimum of four tank field monitoring wells located in each corner of the tank field are required. Tank field monitoring wells cannot be used exclusively to evaluate groundwater flow direction A site map drawn to scale depicting the locations of the permanent sampling points must be included in the BASA Report. Groundwater samples must be collected from each of the required sampling locations and analyzed to assess for the potential presence of Petroleum Product constituents. For newly installed monitoring points, one soil sample per borehole must also be analyzed. The soil sample from each borehole with the highest field screening concentration of volatile organic compounds should be selected for laboratory analysis. Additional analyses for non-petroleum constituents must also be conducted if records review or other evidence exists that indicate the possible release of such constituents. At a minimum, the following analyses shall be performed on at least one soil and one groundwater sample from each of the required monitoring points pursuant to this section: US EPA Method 200/6000/7000 series for Lead, US EPA Method 8260 for oxygenates ; and, the MassDEP Methods for VPH and EPH.

2.4 Interviews

The purpose of conducting interviews with current and/or past owners and/or operators of the Dispensing Facility is to obtain additional information about potential releases which may have occurred at the Dispensing Facility which
are not necessarily well documented and to gather more specific data about historical operations at the site. Interviews can be conducted by phone or in writing, although interviews conducted in person generally result in more thorough information exchange. Interviews may be conducted either before, during, or after the site reconnaissance. At a minimum one interview with the current owner or operator of the Dispensing Facility prior to conducting the Site Reconnaissance per Section 2.30.1 shall be performed. Ideally the interview should be conducted with someone who is knowledgeable about current and historical operations at the Dispensing Facility including the current and historical UST systems. Interviews with prior owners or operators are encouraged although not required. Guidance on the types of questions that should be asked during the interview are provided in Table 5.

2.5 Report

The BASA Report should be presented in the format shown in Table 6. The report must include a summary and conclusion section which provides the following conclusion:

> Based upon the records review, interviews, site reconnaissance, and site sampling activities, there are no levels of Petroleum Products, or conditions related to a release of Petroleum Products which require notification to MassDEP and which require a Response Action,

If the BASA Report cannot include this conclusion, the BASA Report and the Application for Certificate of Compliance will be Disapproved and should not be submitted. (You may contact the DOR UST Program for further guidance.)

The summary and conclusions section can provide additional language to qualify the basis for the stated conclusion and provide more specific details about the types of information which were used in reaching the stated conclusion.

The BASA must be signed by a Massachusetts Licensed Site Professional and contain the following opinion in the format shown:

OPINION

I attest under the pains and penalty of perjury that I have personally examined and am familiar with this submittal, including any and all documents accompanying this submittal. In my professional opinion and judgement, I further declare under the penalty of perjury that to the best of my knowledge and belief the statements made and information provided in this submittal are true and that the submittal meets the minimum requirements for a BASA based upon the application of 503 CMR 2.02 Definitions, BASA and Policy # UST-21J-001 (as amended).

Release Tracking Number: _____-_____(if applicable)

LSP Name:_____Title:_____

LSP Number:_____ Date Issued:_____/_____/_____

LSP Organization:_____

Telephone/Ext.:__( ) _____-_____ e-mail address _____

LSP Signature:_____

Table 1 - Information Sources

1. Federal and State Information Sources
   - Federal/State RCRA generators list
   - Massachusetts Transition List (Locations to be Investigated, LTBIs, and Confirmed Disposal Sites)
   - Massachusetts Release Notification Listing
   - MassDEP sites database electronic portal files
   - MassDEP UST Registration Database

2. Local Information Sources
   - Department of Health
   - Local Conservation Commission
   - Fire Department
   - Local electric utility company (for records pertaining to PCBs)
   - Sanborn Maps
   - Aerial Photographs
   - Local Municipal Offices

3. Sources of Local Hydrogeological Information
   - USGS and/or State Geological Survey Hydrologic Atlases and Basic Data Reports
   - Bedrock Geologic Maps
   - Surficial Geologic Maps
   - Massachusetts GIS Maps

Table 2

Historical information to be Included in the Board Acceptable Site Assessment

1. Dispensing Facility ownership
2. Underground Storage Tank installation, usage, and closure records for current and prior UST Systems
3. Oil and/or hazardous materials used and/or disposed of at the Dispensing Facility for both current and past operations, which occurred at or in the vicinity of the Dispensing Facility
4. Types and uses of buildings or other structures which are or were present at the Dispensing Facility

Table 3

Components of the Site Reconnaissance

- General Setting of the Dispensing Facility
- Site
  - Site Topography and FeaturesVegetation/Wetlands Hydrologic Features
  - Land Use
  - Current use of Dispensing Facility
  - Past use of Dispensing Facility (if evidence exists)
  - Current and past use of abutting properties
  - Geologic, hydrogeologic, and topographic conditions
  - Description of structures
  - Bay drains and oil water separators
  - Above ground storage tanks
- Dispensing-Facility Operations
  - Brief chemical inventory including quantity and chemical/waste being stored Odors
  - Unidentified containers
  - Pits, ponds, lagoons, stained soil or pavement
  - Wells: private wells, dry wells, irrigation wells, injection wells, abandoned wells, monitoring wells

Table 4
Site Reconnaissance Sketch

Dispensing Facility:

1. Buildings
2. Pump islands
3. Above/underground storage tanks with distribution lines and vent lines (if known)
4. Floor drains and sumps - how constructed?
5. Existing monitoring wells
6. Stained asphalt, dead/stressed vegetation, pits, ponds, lagoons
7. Overfill protection on tank fills

Adjacent Properties:

1. Land usage (residential, commercial, industrial)
2. Surface water bodies
3. USTs & ASTs
4. Wells: Private wells, dry wells, irrigation wells, injection wells, abandoned wells, monitoring wells

Table 5

Suggested Information and Questions for Interviews

1. Current Date.
2. Name and affiliation of person conducting the interview.
3. Name and affiliation of person being interviewed.
4. Position of person being interviewed.
5. Years that interviewee has been in the stated position.
6. Site history: Describe prior site usage and operations, if known.
7. Prior ownership: Provide any information regarding historical site ownership and dates.
8. Tank history: Describe current size, age and contents of any STs/ASTs tanks and reason for tank replacements orupgrades if conducted.
9. Have any of the tanks been relined? If so, when and why?
10. Have there any been any incidents of tank overfills or other petroleum releases?
11. Are there any abandoned tanks on the site? (If so, where and why were they abandoned)
12. Have there been any accidents which have occurred at the Dispensing Facility which resulted in a release of Petroleum Product?
13. Are there any known environmental problems at the Dispensing Facility or surrounding properties?
14. Are there any underground or above ground site utility maps available? (If so, please provide)

Some of these questions may not be applicable for sites which are not currently a Dispensing Facility

Outline for Board Acceptable Site Assessment Report

Section 1.0 Introduction

Section 2.0 General Information about the Dispensing Facility

2.1 Address and geographic location of the Dispensing Facility

2.2 A general description of the land use surrounding the Dispensing Facility including information obtained during site reconnaissance (see Table 3)

2.3 Soil and groundwater categories defined by 310 CMR 40.0930

Section 3.0 Description of the Dispensing Facility

3.1 Area locus map, based upon a U.S.G.S topographic or equivalent map, depicting an area ½-mile radius around the Dispensing Facility and a GIS

3.2 Site map depicting significant features of the Dispensing Facility (see Tables 3 and 4), and property boundaries, and discussion of pertinent information within text

3.3 Types and uses of buildings or other structures which are present at the Dispensing Facility

3.4 Hydrogeologic setting (see Table 1). Describe local site geology and hydrogeology which affect the potential for contaminant migration

3.5 Summary of site reconnaissance information (see Table 3)

Section 4.0 History of Dispensing Facility (see Table 2)

4.1 Ownership/lessorship (include information obtained from Interviews, Table 5)

4.2 UST System installation, usage, closure and Information obtained from interviews, Table 5).

4.3 Past operations at, and In the vicinity, of the Dispensing Facility

4.4 Past buildings or structures which were present at the Dispensing Facility

Section 5.0 Evaluation of Environmental Conditions at the Dispensing Facility

5.1 Summary of information obtained from publicly available sources regarding existing environmental conditions at the Dispensing Facility (see Table 1)

5.2 Method and results of sample collection (see Section 2.3.1)

5.3 A description of the present conditions at the Dispensing Facility including a discussion of historical information and site sampling activities and results which provide an overview of the environmental conditions at the site.

Section 6.0 Conclusions

6.1 Using one of the formats below, provide a summary of data and information to substantiate that there are no levels of Petroleum Products or conditions related to a release of Petroleum Products that require notification to MassDEP

Information Source	Significant Findings & Conclusions	Evidence of Contamination? (Yes or No)
Records		
Hazardous Materials Use & Storage Areas		
Potential Release Areas: • Petroleum Product UST System • Other USTs (waste oil, heating oil) • ASTs • Floor drains • Oil/Water Separator • Site Reconnaissance (observations) • Sampling Results • Other		

6.2 Provide a conclusion that based upon the records review, interviews, site reconnaissance, and site sampling activities that there are no levels of Petroleum Products or conditions related to a release of Petroleum Products that require notification to MassDEP.

Appendices

Appendix A Site Reconnaissance field notes and site sketch

Appendix B Supporting analytical documentation for groundwater and soil samples, as applicable.